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MEMORANDUM FOR: Chief, Technical Services Group, NPIC  
ATTENTION : Chief, Technical Operations Staff, TSG/NPIC  
SUBJECT : RED Monthly Report for April 1972

Significant Items of Interest for April 1972:

1. Wide-Field, High-Power, Anamorphic Stereoviewer [ ] The contractor is attempting to complete all of the optical modules during this month in preparation for the optical bench test. A sub-contract has been let for the manufacture of the upper and lower body castings; delivery is presently anticipated within twelve weeks. This should improve the final delivery date of the prototype which is now 1 March 1973.

25X1

2. Lenticular Rear Projection Screen [ ] A diamond bit grinding machine has been designed by the contractor and new bits are being ground. The program for ruling the master gratings has been completed. This program will be used in the ruling machine to generate its own special scales for subsequent ruling of the master gratings. A combination mask exposure and projection device has been completed by the contractor as well as the design for the large 31" x 31" plastic rolling machine. Delivery of prototype screens by 31 October 1972 is still anticipated.

25X1

25X1

GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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Declass Review by NIMA/DOD

NRO review(s) completed.

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25X1

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5. [ ] (During Month of April). The [ ] device is being operationally used in PMD on a trial basis. The use is being limited to paper prints of non-system imagery which are difficult to handle on the [ ] Comparators. Initial results are encouraging. The Electromagnetic tests [ ] are completed and show accuracy not effected by background [ ]

6. On 3-4 May presentations of the [ ] CRT Study and the [ ] Image Storage Study were given. These presentations complete the formal work under these contracts except for submission and approval of the final report.

7. Color Technology Support [ ] Five work order proposals have been received and approved. The preliminary evaluation of the new, high resolution [ ] transparency material showed that this material has a very real potential as a substitute for the presently used [ ] color reproduction materials.

8. Unconventional Film Evaluation [ ] [ ] visited RB to discuss best results of Dry Diazo and Daylight Dry Silver [ ] visited RB and released additional information on a new heat-processed high resolution duplicating film to be marketed [ ] The film is expected to be available for demonstration in July of this year.

9. Photoscience Support [ ] Two work orders were authorized--one for a Survey of Liquid Crystal Technology, the other for a Printing Ink Evaluation. A proposal was received for an Evaluation of Noble-Metal Treatments for Controlling Photographic Contrast. It is in evaluation.

10. Scanning Electron Microscopy [ ] A work order was authorized under our current contract permitting [ ] to begin an exploratory evaluation of SEM as a tool for "reading out" surface relief images. Completion is scheduled for 30 June 1972.

11. The Color Control Cell, with the exception of extra air conditioning, was completed. It is located on the second floor of the APSD area. A program of PI color testing, using the cell, will begin shortly.

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25X1

TOP SECRET

TOP SECRET

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14. The PI Scan & Search Station arrived on 25 April. This instrument will be installed in the TSG/ESD test facility on the first floor of NPIC. Preacceptance tests will take place the first week of May, with TSG/ESD, TSG/RED/DB, and the contractor [ ] taking part. Further tests have been scheduled by TSG/ESD through January 1973.

15. Continuation of the programmed Stereo Scanning Utility Study [ ] was disapproved; cost estimates for cataloging completed test materials and summarizing project status have been requested of the contractor.

16. The DIA version of the [ ] Light Table has failed to pass acceptance tests at NPIC. The contracting officer has informed [ ] of the deficiencies in the table and given [ ] until 1 May to respond with an approach to correcting the problem.

17. High Intensity Tracking Light Source (HILS). The final design review for the HILS took place at [ ] the week of 24 April. The HILS is expected to be ready for preacceptance tests at [ ] during the latter part of May.

18. The modification package for the [ ] Stereocomparator was completed [ ] on 18 April. The modifications included: fabrication and installation of new reticles, a headrest, a card punch coupler, a new joystick control system, and a stage decoupling switch for the joystick.

19. The semi-annual review of contractor clearances was completed by SIS during April.

20. RED input to FY-72 Third Quarter Budget Review and the FY-73/74 Office Estimates (non R&D budget) were completed.

21. [ ] Symposium [ ] An invitation from ORD has been accepted to present an overview of the Imagery Interpretation Research Program to the [ ] Symposium, 8-9 May. The Symposium is designed to provide Agency management with a summary of the types of human factors R&D support available under contract and within Agency components.

25X1

TOP SECRET

TOP SECRET

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25X1

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25X1 22. Implementation of FY-71 IIRP Results [ ] RED management  
25X1 [ ] personnel completed and submitted to C/TSG the last  
items in an Implementation Plan for the FY-71 program. After coordinat-  
ing the results with IEG, a report will be prepared for the Executive  
Director, NPIC.

25X1 23. Image Comparison Microscope Evaluation [ ] On 7 April  
25X1 [ ] presented the results of the human factors and opera-  
tional suitability evaluations of the ICM. Copies of the final report  
were distributed within the Center. Additional copies are available from  
RED/SIS.

25X1 24. Demonstration of Device to Measure Visual Focus [ ]  
25X1 [ ] demonstrated a prototype instrument developed under the  
IIRP which measures the observer's visual focus as he views through a  
microscope. The instrument appears to be a replacement for another  
instrument currently in use, but which is difficult for the technicians  
to employ.

25X1 25. Search and Scan PI Station Support [ ] Personnel from  
25X1 RED/SIS, IEG and ESD met 6 April to develop training requirements in  
support of [ ] evaluation of the PI Station.

25X1 26. Meetings, Briefings, etc.:

a. On 20 and 26 April [ ] presented the EOI Simulation  
Game to representatives from APSD and IEG.

25X1 b. On 20 April [ ] presented the results of a recent  
B/W and Color stereo acuity testing program to those IEG/PHD person-  
nel who served as observers. For the record, the average test scores  
for PHD were significantly higher than those for any other group of  
Center or non-Center personnel who have been administered the tests.

c. Vision Testing Research Program. The Center is in the  
process of assisting TOPOCOM to develop a Vision Testing Research  
Program similar to the one conducted at NPIC.

25X1 d. Contact Lens and Impact Resistant Lens Evaluations. Messrs.  
[ ] met with representatives from the  
Office of Medical Services on 18 April to discuss the Center's  
programs to evaluate impact resistant and contact lenses. OMS will  
provide professional and technical support to these efforts, as  
appropriate.

25X1

TOP SECRET

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e. Symmetrical/Asymmetrical Stereo Evaluation.

RED/SIS, have initiated plans to assess the influence of varying types and amounts of stereo asymmetry upon photointerpretation.

f. [ ] attended the AMA meeting on Water and Air Pollution in Chicago, 17-19 April with the C/LB/SS. The meeting was very informative and pointed out that the EPA is cracking down and all present municipal sewer plants and commercial companies must show definite progress in pollution control by 1976, with a zero level of contamination required by 1981.

g. [ ] attended the Optical Society of America meeting in New York on 11-13 April.

h. [ ] briefed General Penney, Chief of Defense Mapping Agency, on the High Precision Stereo Comparator.

i. [ ] made arrangements to transfer two surplus pieces of equipment to other Government agencies. The [ ] Plotter was transferred to U.S. Geological Survey and the Data Block Reader to U.S. Army TOPOCOM.

j. [ ] has been complimented by two groups from DDS&T on RADCIS--the R&D Contract Information System developed for NPIC. The Director of ELINT states that he plans to implement this system in his organization.

27. Training.28. Proposals Approved & Received:

a. Interactive Stercviewer [ ]

b. Dry Color Development [ ]

25X1

<sup>5</sup>  
**TOP SECRET**

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c. 40-Inch Processor Modification

d. Vibration Dampening of Light Table

e. Advanced Photometer

f. Eyeshades for Zoom

g. Modification to

h. An proposal for a follow-on contract was received and is under review.

i. has proposed to conduct research on film grain noise. A PAR has been initiated.

j. has proposed to conduct systems analyses on DIM hardware and software.

k. proposed to continue consulting services in FY-73. This proposal has been forwarded to RED/SIS.

29. Personnel:

Significant Items of Interest for May 1972:

1.

2.

will visit Westover to discuss mutual work efforts in image quality microdensitometry, grain noise, and manipulation.

3. Final reports will be received for the contracts

Deputy Chief

Research & Engineering Division

TSG/NPIC

25X1

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